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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/803,111

Applicant(s)

GOLDICK ET AL.

Examiner

Susan F. Rayyan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-39 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,920,579 issued to Samuel M. Cramer et al (Cramer") in view of US Patent Number 5,860,116 issued to Peter Washington ("Washington").

As per independent claim 1 Cramer teaches:

A method of moving a file service within a plurality of storage filers coupled to a communication network and a storage network (Abstract), the method comprising:

generating file service data for the file service in a first storage filer (column 5, lines 37-38, file service data equates to state information);

associating the file service with an identification (column 6, lines 39-45);

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allocating the file service data to at least one memory ... in the first storage filer based on the identification (column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory);
determining an indication to transfer the file service from the first storage filer (column 2, lines 59-64).

Cramer does not explicitly teach transferring the at least one memory page using the identification from the first storage ... to a second storage. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transferring the at least one memory page using the identification from the first storage ... to a second storage to efficiently control location of memory pages as described by Washington (column 1, lines 34-36).

As per claim 2, same as claim argument above and Cramer teaches:
further comprising identifying the second storage filer (column 6, lines 41-45, Filer B).

As per claim 3, same as claim argument above and Cramer teaches:
wherein identifying the second storage filer comprises determining whether the second storage filer has adequate memory for the at least one memory page (column 6, lines 41-45, storing a mirror copy in main storage of filer b).

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As per claim 4, same as claim argument above and Cramer teaches:
further comprising transmitting a message to clients for the file service connected to the communication network to communicate with the second storage filer (column 3, lines 13-15).

As per claim 5, same as claim argument above and Cramer teaches:
further comprising suspending file operations of the file service (column 3, lines 12-13, first filer ceases accepting new requests).

As per claim 6, same as claim argument above and Washington teaches:
further comprising reducing unused space in the at least one memory page (column 2, lines 30-36).

As per claim 7, same as claim argument above and Washington teaches:
further comprising fixing pointers related to the at least one memory page (column 4, lines 53-55, updated to point to new page).

As per claim 8, same as claim argument above and Cramer teaches:
wherein determining the indication is based on a policy to transfer the file service from the first storage filer (column 2, lines 59-64, policy to transfer associated with running the routine maintenance and upgrades).

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As per claim 9, same as claim argument above and Cramer teaches:

wherein determining the indication further comprises receiving an instruction to transfer the file service from the first storage filer (column 3, lines 29-31, operator initiates take over by a command).

As per independent claim 10 Cramer teaches:

A system for storage filing (Abstract), the system comprising:

a first storage filer coupled to a communication network and a storage network and configured to generate file service data for a file service(column 5, lines 37-38, file service data equates to state information), associate the file service with an identification(column 6, lines 39-45), allocate the file service data to at least one memory ..in the first storage filer based on the identification(column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory), determine an indication to transfer the file service from the first storage filer(column 2, lines 59-64).

Cramer does not explicitly teach transfer the at least one memory page using the identification from the first storage ... and a second storage... configured to receive the at least one memory page. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transfer the at least one memory page using the identification

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from the first storage... and a second storage ... configured to receive the at least one memory page to efficiently control location of memory pages as described by Washington (column 1, lines 34-36).

As per claim 11, same as claim argument above and Cramer teaches: wherein the first storage filer is configured to identify the second storage filer(column 6, lines 41-45, Filer B).

As per claim 12, same as claim argument above and Cramer teaches: wherein the first storage filer is configured to identify the second storage filer by determining whether the second storage filer has adequate memory for the at least one memory page(column 6, lines 41-45, storing a mirror copy in main storage of filer b).

As per claim 13, same as claim argument above and Cramer teaches: wherein the first storage filer is configured to transmit a message to clients for the file service connected to the communication network to communicate with the second storage filer(column 3, lines 13-15).

As per claim 14, same as claim argument above and Cramer teaches: wherein the first storage filer is configured to suspend file operations of the file service(column 3, lines 12-13, first filer ceases accepting new requests).

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As per claim 15, same as claim argument above and Washington teaches:
wherein the first storage filer is configured to reduce unused space in the at least one memory page (column 2, lines 30-36).

As per claim 16, same as claim argument above and Washington teaches:
wherein the second storage filer is configured to fix pointers related to the at least one memory page (column 4, lines 53-55, updated to point to new page).

As per claim 17, same as claim argument above and Cramer teaches:
wherein the first storage filer is configured to determine the indication is based on a policy to transfer the file service from the first storage filer (column 2, lines 59-64, policy to transfer associated with running the routine maintenance and upgrades).

As per claim 18, same as claim argument above and Cramer teaches:
wherein the first storage filer is configured to receive an instruction to transfer the file service from the first storage filer (column 3, lines 29-31, operator initiates take over by a command).

As per independent claim 19 Cramer teaches:

A system for storage filing coupled to a communication network and a storage network (Abstract), the system comprising:

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means for generating file service data for a file service in a first storage filer(column 5, lines 37-38, file service data equates to state information);

means for associating the file service with an identification(column 6, lines 39-45);

means for allocating the file service data to at least one memory page in the first storage filer based on the identification(column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory);

means for determining an indication to transfer the file service from the first storage filer(column 2, lines 59-64).

Cramer does not explicitly teach means for transferring the at least one memory page using the identification from the first storage ... to a second storage. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transferring the at least one memory page using the identification from the first storage ... to a second storage to efficiently control location of memory pages as described by (column 1, lines 34-36).

As per claim 20 Cramer teaches:

A method of moving a file service in a first storage filer located between a communication network and a storage network(Abstract), the method comprising:

determining an indication to transfer a file service from the first storage filer(column 2, lines 59-64);

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identifying an available storage filer to receive the file service (column 2, lines 6, second filer may takeover from first filer);

identification for the file service(column 6, lines 39-45).

Cramer does not explicitly and transmitting at least one memory page with file service data of the file service from the first storage ... to the available storage Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with and transmitting at least one memory page with file service data of the file service from the first storage ... to the available storage ... to efficiently control location of memory pages as described by (column 1, lines 34-36).

As per claim 21, same as claim argument above and Cramer teaches:

further comprising: generating the file service data for a file service in a first storage filer(column 5, lines 37-38, file service data equates to state information); associating the file service with the identification(column 6, lines 39-45)..

As per claim 22, same as claim argument above and Cramer teaches:

further comprising allocating the file service data to the at least one memory page in the first storage filer based on the identification(column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory).

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As per claim 23, same as claim argument above and Cramer teaches:
wherein identifying the available storage filer comprises determining whether the available storage filer has adequate memory for the at least one memory page(column 6, lines 41-45, storing a mirror copy in main storage of filer b).

As per claim 24, same as claim argument above and Cramer teaches:
further comprising transmitting a message to clients for the file service connected to the communication network to communicate using an address of the available storage filer(column 3, lines 13-15).

As per claim 25, same as claim argument above and Cramer teaches:
further comprising suspending file operations of the file service(column 3, lines 12-13, first filer ceases accepting new requests).

As per claim 26, same as claim argument above and Washington teaches:
further comprising reducing unused space in the at least one memory page(column 2, lines 30-36).

As per claim 27, same as claim argument above and Washington teaches:
further comprising fixing pointers related to the at least one memory page(column 4, lines 53-55, updated to point to new page).

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As per claim 28, same as claim argument above and Cramer teaches:
wherein the file service comprises a Common Internet File System
session/service (column 4, lines 54-56, Common Internet File System).

As per claim 29, same as claim argument above and Cramer teaches:
wherein the file service comprises a Network File System session/service
(column 4, lines 53-54, Network File System).

As per independent claim 30 Cramer teaches:

A first storage filer located between a communication network and a storage
network(Abstract), the first storage filer comprising:

a processor configured to determine an indication to transfer a file service from
the first storage filer(column 2, lines 59-64) and identify an available storage filer
to receive the file service(column 2, lines 6, second filer may takeover from first
filer);

an identification for the file service(column 6, lines 39-45).

Cramer does not explicitly an interface configured to transmit at least one
memory page with file service data of the file service from the first storage ... to
the available storage ... and a memory configured to store the at least one
memory page. Washington does teach this limitation (column 2, lines 29-36) to
efficiently control location of memory pages. It would have been obvious to one
of ordinary skill in the art at the time of the invention to modify Cramer with to

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transmit at least one memory page with file service data of the file service from the first storage ... to the available storage ... and a memory configured to store the at least one memory page to efficiently control location of memory pages as described by (column 1, lines 34-36).

As per claim 31, same as claim argument above and Cramer teaches:

wherein the processor is configured to generate file service data for a file service in a first storage filer and associate the file service with the identification (column 5, lines 37-38, file service data equates to state information and column 6, lines 39-45).

As per claim 32, same as claim argument above and Cramer teaches:

wherein the processor is configured to allocate the file service data to the at least one memory page in the first storage filer based on the identification (column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory).

As per claim 33, same as claim argument above and Cramer teaches:

wherein the processor is configured to determine whether the available storage filer has adequate memory for the at least one memory page (column 6, lines 41-45, storing a mirror copy in main storage of filer b).

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As per claim 34, same as claim argument above and Cramer teaches:
wherein the processor is configured to transmit a message to clients for the file service connected to the communication network to communicate using an address of the available storage filer(column 3, lines 13-15).

As per claim 35, same as claim argument above and Cramer teaches:
wherein the processor is configured to suspend file operations of the file service(column 3, lines 12-13, first filer ceases accepting new requests).

As per claim 36, same as claim argument above and Washington teaches:
wherein the processor is configured to reduce unused space in the at least one memory page(column 2, lines 30-36).

As per claim 37, same as claim argument above and Cramer teaches:
wherein the file service comprises a Common Internet File System Session/service(column 4, lines 54-56, Common Internet File System).

As per claim 38, same as claim argument above and Cramer teaches:
wherein the file service comprises a Network File System session/service(column 4, lines 53-54, Network File System).

As per independent claim 39 Cramer teaches:

A first storage filer located between a communication network and a storage network (Abstract), the first storage filer comprising:

means to determine an indication to transfer a file service from the first storage filer(column 2, lines 59-64);

means to identify an available storage filer to receive the file service(column 2, lines 6, second filer may takeover from first filer);

an identification for the file service(column 6, lines 39-45).

Cramer does not explicitly teach means to transmit at least one memory page with file service data of the file service from the first storage ... to the available storage. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with means to transmit at least one memory page with file service data of the file service from the first storage ... to the available storage to efficiently control location of memory pages as described by (column 1, lines 34-36).

Response to Arguments

3. Applicant's arguments filed February 12, 2007 have been fully considered but they are not persuasive.

Applicant argues "Cramer does not teach the use of memory pages to store file service data" (page 5) and "Washington does not provide transferring of memory pages having file service data" (page 6). Examiner finds Cramer teaches allocating the file service data to at least one memory ... in the first storage filer based on the identification at column 6, lines 41-45, state information (file service data) stored in mass storage device non-volatile random access memory. (Specification states at paragraph 122 the memory pages are any fixed amounts of memory). Cramer does not explicitly teach transferring the at least one memory page using the identification from the first storage ... to a second storage. Washington does teach this limitation (column 2, lines 29-36, as ,moving memory pages from a first main memory to a second main memory) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transferring the at least one memory page using the identification from the first storage ... to a second storage to efficiently control location of memory pages as described by Washington (column 1, lines 34-36).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the storage filer may allocate the file service data, including file

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management data structures and state information for a TCP connection to the memory page based on an associated virtual server ID that is unique within a cluster of storage filers. The storage filer may also tag the file service data with the virtual server ID. By allocating the file service data to a memory page by virtual server ID and tagging the file service data, quick and efficient transfer of the service may occur") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that Washington is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Washington is classified in Class 711 which is Electrical Computers and Digital Processing: Memory. Washington is combined with Cramer because of its teaching of relocating or replicate memory pages from one memory location to another (see column 2, lines 30-35).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally

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available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Cramer does not explicitly teach transferring the at least one memory page using the identification from the first storage ... to a second storage. Washington does teach this limitation (column 2, lines 29-36, as ,moving memory pages from a first main memory to a second main memory) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transferring the at least one memory page using the identification from the first storage ... to a second storage to efficiently control location of memory pages as described by Washington (column 1, lines 34-36).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan F. Rayyan whose telephone number is 571-272-1675. The examiner can normally be reached on M-F, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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5/11/2007


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